DRAFT

MONTANA'S

STATE WILDLIFE ACTION PLAN

MONTANA FISH, WILDLIFE & PARKS
2014

The mission of Montana Fish, Wildlife & Parks (FWP) is to provide for the stewardship of the fish, wildlife, parks, and recreational resources of Montana, while contributing to the quality of life for present and future generations. To carry out its mission, FWP strives to provide and support fiscally responsible programs that conserve, enhance, and protect Montana's 1) aquatic ecotypes, habitats, and species; 2) terrestrial ecotypes, habitats, and species; and 3) important cultural and recreational resources.

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EXECUTIVE SUMMARY

Montana's first State Wildlife Action Plan (SWAP), the Comprehensive Fish and Wildlife Conservation Strategy, was approved by the U.S. Fish and Wildlife Service (USFWS) in 2006. Since then, many conservation partners have used the plan to support their conservation work and to seek additional funding to continue their work. For Montana Fish, Wildlife & Parks (FWP), State Wildlife Grant (SWG) dollars have helped implement the strategy by supporting conservation efforts for many different species and habitats. This revision details implemented actions since 2006.

To date, Montana has received approximately $12.7 million through the SWG program in 12 years. However, continued Congressional support of the SWG program is questionable. Given the uncertain future of SWG, this SWAP revision was designed to do more than simply allocate SWG money. This SWAP identifies community types and areas in Montana that warrant conservation attention regardless if SWG is available to conduct the work. This means other funding sources may need to be explored and new partnerships forged. This SWAP is not meant to be an FWP plan, but a plan to guide conservation in Montana for the next 10 years.

One hundred and twenty-seven Species of Greatest Conservation Need (SGCN) are identified in this revision. Forty-seven of these are identified as being in most critical conservation need. In addition to identifying these species, their associated habitats were prioritized as Community Types of Greatest Conservation Need (CTGCN). Twelve terrestrial CTGCN were identified and streams, rivers, and several lakes and reservoirs were identified as aquatic CTGCN. More SGCN are found within these communities than any other types within the state. Therefore conservation efforts implemented in one CTGCN may benefit several species.

For successful implementation of this plan, it is critical that conservation actions be tracked so that success can be monitored, and adjustments made in priorities and actions if necessary. FWP will be employing methodologies, using USFWS' Tracking and Reporting Actions for the Conservation of Species (TRACS) and the Association of Fish and Wildlife Agencies' (AFWA) *Measuring the Effectiveness of State Wildlife Grants - Final Report* (AFWA 2011) for consistent reporting and measuring effectiveness.

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MONTANA FISH, WILDLIFE & PARKS
MISSION STATEMENT AND VISION FOR THE 21ST CENTURY

Montana Fish, Wildlife & Parks, through its employees and citizen Commission, provides for the stewardship of the fish, wildlife, parks and recreational resources of Montana while contributing to the quality of life for present and future generations.

Montana Fish, Wildlife & Parks will provide the leadership necessary to create a commitment in the hearts and minds of people to ensure that, in our second century, and in partnership with many others, we will sustain our diverse fish, wildlife and parks resources and the quality recreational opportunities that are essential to a high quality of life for Montanans and our guests (Montana Fish, Wildlife & Parks 2008).

Together, these statements lay the foundation for this State Fish and Wildlife Action Plan.

INTRODUCTION

In the early years of fish and wildlife management, the focus was placed on game animals and their habitats. This focus was, and continues to be, a result of hunters and anglers providing most of an agency's funding through purchasing hunting and fishing licenses. However, Montana Fish, Wildlife & Parks (FWP) is mandated to manage all wildlife (FWP 2011), including species not typically fished or hunted. Without reducing the attention focused on important game species, FWP needs to find a way to manage for the other species with the most critical needs.

To help address the conservation needs of these other wildlife species, Congress created the State Wildlife Grant (SWG) funding program in 2000. SWG funds are intended "... for the development and implementation of programs for the benefit of wildlife and their habitat, including species that are not hunted or fished." Congress stipulated that each state and territory that wished to participate in the SWG funding program must develop a State Wildlife Action Plan (SWAP) by October 1, 2005. All 56 states and territories submitted SWAPs by the deadline and made commitments to review and perhaps revise their SWAP at least every 10 years. Montana's first SWAP, the Comprehensive Fish and Wildlife Conservation Strategy (CFWCS), was approved by the U.S. Fish and Wildlife Service (USFWS) in January 2006.

FWP has received almost $12.7M from SWG apportionment since 2002. However, SWG funding has declined since 2010 and there may not be consistent support from Congress for the program in future years. Because of this, the SWAP revision was designed to identify species and their habitats that are in greatest need of conservation *despite* availability of SWG support in the future. The implication of this is that community types, priority species, and focal areas *still require attention*. Partnerships and other funding sources should be sought by FWP, and other agencies and organizations should be encouraged to focus their conservation efforts on these species, habitats, and areas. Even with SWG funding, the work identified in this plan far exceeds the funding amounts SWG would provide.

Though FWP was the lead agency responsible for reviewing and revising the CFWCS, collaboration with partners was necessary to ensure that the future of Montana's wildlife was secure. This SWAP identifies priority community types, species, and focal areas to aid not only FWP's decisions, but to assist other agencies and organizations in making decisions on where to focus their conservation efforts.

Every community type in Montana and all vertebrates, crayfish, and mussels were considered in this revision. Conservation actions were developed for the habitats, areas, and species considered to be in greatest conservation need, resulting in a document that provides conservation direction for the next 10 years in Montana.

ROAD MAP

Congress identified 8 required elements that each SWAP had to address for the 2005 submission. These elements have not been changed for the revisions and are still required to be addressed. In addition to these 8 required elements, the Association of Fish and Wildlife Agencies (AFWA) document, *Best Practices for State Wildlife Action Plans* (2012), was reviewed and some recommendations were incorporated into this SWAP.

This revision of Montana's CFWCS is considered a major revision by the USFWS. Several components of this revision were developed using completely different methodologies than the CFWCS and for others, more thorough descriptions are provided. What follows is an easy-to-read outline of the changes made in this SWAP revision for each of the 8 required elements. Please see the identified pages for detailed information.

1. Information on the distribution and abundance of species of wildlife, including low and declining populations, as the state fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the state's wildlife. *Pages 132-326*.

As with the CFWCS, the FWP and Montana Natural Heritage Program (MNHP) Point Observation Database provided observation data for all species. The FWP/MNHP co-managed online Field Guide was used to develop the individual species pages in this SWAP.

The method of estimating low and declining populations for this revision was much different than the CFWCS. Instead of using the formula developed for the CFWCS, the tested and accepted method that FWP and MNHP have been using for a decade to identify Species of Concern (SOC) was used in this revision (MNHP and FWP 2004). This method is a standardized ranking system to denote global and state status (Master et al. 2003).

2. Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1). *Pages 22-131*.

A different approach was taken to describe habitats and community types for the SWAP revision. Most technical team members felt the community type descriptions were too broad and wanted to address habitat at a finer scale than what was in the CFWCS.

3. Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats. *Pages 22-326*.

Part of the process used to identify community types and focal areas for this SWAP, was to identify threats and impacts to species and habitats. The teams recommended specific conservation actions at the community type and species levels.

4. Descriptions of conservation actions proposed to conserve the identified species and habitats and priorities for implementing such actions. *Pages 22-326*.

AFWA's recommendation to use common language when describing conservation actions will be employed in tracking implementation of this SWAP (AFWA 2011). The technical teams and other internal and external experts were tasked with identifying and recommending very specific conservation actions for each general action, if applicable.

5. Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions. *Pages 327-328*.

Part of the recommended conservation actions that the technical teams et al. provided were monitoring recommendations for species and/or community types. These recommendations will be developed in more detail in the follow up Implementation Plan. This Implementation Plan will be reviewed and perhaps revised based on data collected and new information, after the first 3 years of implementation.

6. Descriptions of procedures to review the strategy at intervals not to exceed 10 years. *Pages 327-328*.

As mentioned earlier, this SWAP will be a living document. As data and new information are collected, this SWAP will be revised accordingly, but no more than once per year. The appropriate correspondence will be sent to USFWS when asking to approve the revision(s). FWP's forthcoming Implementation Plan, as well as new information from our partners, will aid in revising the SWAP.

According to current Congressional rules, this SWAP needs to be fully reviewed, and perhaps revised, by 2024. FWP expects that a major revision will be conducted then. The results of 10 years of data collection and analysis will help to modify species status, habitat condition, and threats or impacts to species or their habitats. As with this current revision, the next revision in 2024 will utilize the best available information and be able to direct Montana's conservation needs for another decade.

7. Plans for coordinating the development, implementation, review, and revision of the plan with federal, state, and local agencies and Indian tribes that manage significant land and water areas within the state or administer programs that significantly affect the conservation of identified species and habitats. *Pages 12-15*.

The Coordinator initially met with several staff of external agencies and organizations to inquire how they would like to be involved in the SWAP revision. The Coordinator then made recommendations to the Steering Committee chair as to which agencies and organizations should be on the technical team for the revision. The recommendations were based on levels of interest and expertise. Several external invitees responded and participated. Some team members were never able to attend a meeting and others had to discontinue participation. Funding, workload, and reduction in force all contributed to the levels of participation.

In addition to the formal technical team, other internal and external experts were consulted on every task the technical teams were asked to complete. In this way, additional cooperation and collaboration was achieved.

8. Broad public participation is an essential element of developing and implementing these plans, the projects that are carried out while these plans are developed, and the species in greatest need of conservation. *Pages 12-15*.

Members of agencies, organizations, and the general public were kept apprised of the revision via an introductory letter, webpage updates, press releases, and 4 newsletters.

PROGRESS REPORT: THE FIRST SEVEN YEARS

Shortly after the USFWS approved Montana's CFWCS in 2006, an FWP Steering Committee began developing a companion document to identify an implementation planning process to further refine priorities identified in the CFWCS. Because of limited funds, it was not possible to fund projects addressing every species or every community type in the CFWCS. The Implementation Plan identified a subset of species and community types on which to focus efforts for the first 6 years (FWP 2006a).

FWP received just over $8.1M in SWG funds since the 2006 CFWCS was approved. Although not everything in the Implementation Plan could be addressed with SWG funding, much work was done. FWP is able to track SWG funded work, but there are many other FWP projects funded through other means that may address conservation actions found in the CFWCS and Implementation Plan. These projects may fulfill CFWCS actions incidentally, and therefore may not be identified as CFWCS successes. In addition, any work other agencies and organizations may have conducted that have supported CFWCS actions is not tracked by FWP either. It is likely that many more actions have been addressed than FWP has the data for.

FWP intends to prudently track the implementation of the new SWAP and subsequent Implementation Plan with the help of USFWS' Wildlife Tracking and Reporting Actions for the Conservation of Species (TRACS) system implementation. In addition, the language describing

strategies as outlined in the AFWA's *Measuring the Effectiveness of State Wildlife Grants – Final Report* (2011), will be used to help track the effectiveness of the SWAP.

COMMUNITY TYPES

The community types below were identified in the 2006 Implementation Plan as habitats needing focused conservation efforts. What follows is a summary of accomplishments since CFWCS approval.

Mountain Streams, Prairie Rivers, and Prairie Streams: FWP has not implemented specific over-arching programs to include the conservation of these community types. However, the day-to-day activities of FWP's Fisheries Division, watershed groups, private landowners, and numerous state and federal resource agency partners, address most of the needs and priorities identified in the 2006 CFWCS. While there is no reasonable way to succinctly identify the extent of these efforts, particularly those guided by collaborating partners, FWP's *Statewide Fisheries Management Plan, 2013 – 2018* (FWP 2013a) is a synthesis of FWP's programs and projects and projects that address management issues related to mountain streams, prairie rivers, and prairie streams. In addition, many conservation easements and fee title acquisitions consider water resources in the evaluations.

Aspens: FWP has secured multiple conservation easements and fee title acquisitions that include healthy or in need of restoration aspen habitat. Habitat acquisition projects such as the Little Doney Lake Project that secured over 2,500 acres of mixed conifer and aspen habitat adjacent to the Blackfoot Clearwater Wildlife Management Area (WMA) have benefited a number of high priority species to include common loons, trumpeter swans, grizzly bears, Canada lynx, and bull trout. As a high priority community type, biologists are actively looking to secure and/or restore aspen habitat when possible and to educate landowners on the importance of these habitats. FWP contributed to a University of Montana passerine and aspen research project in which the impacts of conifer removal on nesting success was quantified for use in future management decision making.

Riparian and Wetlands: FWP has secured multiple conservation easements and fee title acquisitions that include healthy or in need of restoration riparian and wetland habitat. FWP has particularly targeted habitats in critical floodplain zones, habitats currently vegetated by non-native and invasive plant species, and habitats experiencing natural cottonwood regeneration from recent flooding events. Land acquisitions such as the 700-acre island in the lower Yellowstone River, have increased protections for important wetland habitats that support a large diversity of species such as great blue herons, bald eagles, and spiny softshell turtles. The addition of numerous conservation easements along the Milk River in northeast Montana have added protections to private lands and increased the use of conservation minded land management practices. At the Milk River WMA, dense cattail marshes were burned to reduce cattail cover and increase open water. Future water level management will be adjusted to prevent cattail expansion and increase wetland productivity.

Recommendations on the use of setbacks as well as the maintenance of the natural hydrologic and ecologic function of wetlands is described in FWP's recently released *Fish and Wildlife*

Recommendations for Subdivision Development in Montana (FWP 2012). Biologists use these tools to encourage landowners to conserve wetland and riparian habitats. Private and government planning offices across Montana have been provided with this document as well; several are incorporating recommendations in the document.

Sagebrush and Grassland Complexes: FWP has secured multiple conservation easements and fee title acquisitions that include healthy or in need of restoration sagebrush and grassland habitat. FWP has particularly targeted lands in need of restoration and known to be critical nesting habitat for bird species such as the greater sage-grouse and Sprague's pipit. Efforts to restore native vegetation on existing FWP WMAs such as Cree Crossing and Hinsdale have provided nesting, winter roost, and secure migration habitat for a diversity of species.

Over 200 acres were seeded on the Moline Ranch conservation easement to ensure the remaining native sagebrush grassland breaks habitat provides cover and food resources for a diversity of species as well as connectivity to other native habitat pieces nearby.

SPECIES OF GREATEST CONSERVATION NEED

FWP and partners finished a number of planning tools that aim to conserve habitat for all of the species listed below. These efforts included the 2012 release of the *Fish and Wildlife Recommendations for Subdivision Development in Montana* (FWP 2012) and completion of the Crucial Areas Planning System (CAPS), a web-based mapping service. The subdivision recommendations provide advice to developers and homeowners on the use of setbacks as well as the maintenance of the natural hydrologic and ecologic function of wetlands. The recommendations also include sections specific to grasslands designed to reduce the loss of native prairie and maintain larger, intact sections of grassland habitat. In addition, this document provides recommendations to reduce conflicts with bears and other wildlife.

CAPS mapping service was aimed at future planning for a variety of development and conservation purposes so fish, wildlife, and recreational resources can be considered earlier in the development process. CAPS is part of a larger conservation effort that recognizes the importance of landscape scale management of species and habitats by fish and wildlife agencies. Agency biologists use these tools to encourage landowners, developers, and planners to conserve habitats critical to all Montana wildlife.

The species below were identified in the 2006 Implementation Plan as needing focused conservation efforts. What follows is a summary of accomplishments since CFWCS approval.

Northern Leopard Frog: Surveys throughout western Montana as part of the statewide diversity monitoring effort (2008-2010) revealed continued presence of northern leopard frogs across the range. However, populations continue to be threatened by habitat loss and invasive species, such as the American bullfrog, particularly in the western part of the state. Efforts are ongoing to secure habitat at northern leopard frog breeding sites and efforts to eradicate bullfrogs are underway in many locations by partners and private landowners.

The eastern Montana northern leopard frog populations were downlisted from the Montana SOC list from '*potentially at risk*' to '*apparently secure*' in 2009 based on statewide population information. The western population remains an SOC species, highly vulnerable to extirpation.

Burrowing Owl: Conservation easements and habitat restoration in native prairie habitats were conducted throughout much of the Montana burrowing owl range. Burrowing owl monitoring was conducted in combination with prairie dog and mountain plover surveys. Burrowing owls were also recorded as part of the 'Integrated Monitoring by Bird Conservation Region' project (2009-2013). This type of monitoring began in 2009 and will continue through 2014 and is an efficient way of adding observations for multiple species to Montana species databases. Monitoring and multi-species conservation efforts that cover all prairie and grassland birds resulted in a downgrading of the Montana SOC rank for the burrowing owl from '*at risk*' to '*potentially at risk*'.

Greater Sage-Grouse: FWPs use of conservation easements, grazing management agreements, and term leases to conserve and enhance native rangeland have benefited habitat for greater sage-grouse and other sagebrush associated wildlife across greater sage-grouse range. FWP continues to encourage conservation of important seasonal habitats in collaboration with the Natural Resources Conservation Service (NRCS), Bureau of Land Management (BLM), and private landowners using a core-area strategy. FWP has assisted with conservation efforts of the Sage-Grouse Initiative and is facilitating a Greater Sage-Grouse Habitat Conservation Advisory Council. This Council is comprised of citizens and constituents and will gather information, furnish advice, and provide recommendations on policies and actions to the Governor for a statewide greater sage-grouse strategy to preclude the need to list the greater sage-grouse under the Endangered Species Act (ESA). Among FWP's habitat conservation accomplishments is the enrollment of 198,000 acres of sagebrush conservation leases on priority private lands. FWP is leading a research effort in central Montana to quantify the impacts of different grazing systems on brood rearing and adult survival. The greater sage-grouse remains an '*at risk*' species on the Montana SOC list.

Mountain Plover: Conservation easements were secured and habitat restoration in native grassland habitats was conducted in some mountain plover habitats in Montana. Vast occupied prairie dog habitat was documented in 2009, and since plovers are strongly associated with prairie dog colonies, this indicated that mountain plover populations are likely stable in Montana. Surveys conducted in 2011 and 2012 did not support this assumption however, since few plovers were found. Incidental observations outside of survey areas indicated continued plover occupancy throughout their range in Montana. This information contributed to a 'not warranted' for ESA listing finding by the USFWS in 2011. FWP encourages carefully managed grazing that maintains a mosaic of native grassland habitats to benefit mountain plovers as well as other species. Mountain plover habitat and species conservation measures have been established in many areas by various state and federal agencies. Mountain plovers remain an '*at risk*' species on the Montana SOC list.

Trumpeter Swan: Efforts, such as those in the Blackfoot Valley, to reintroduce trumpeter swans have contributed not only to the restoration of the species but also to the public support for swan conservation. From 2005-2009, over 100 swans were released in the Blackfoot Valley in hopes

that breeding pairs would eventually establish in the area and persist into the future. Five pairs established in the area in 2013 and 4 pairs nested, but only one pair successfully fledged young. Monitoring of these birds and their habitat will continue and possible future releases into the area will enhance restoration efforts. Discussions to restore trumpeter swans to places in southwest Montana are underway. FWP participation in The Greater Yellowstone Trumpeter Swan Working Group ensures Montana is involved in rangewide conservation of the species. A number of conservation easements and habitat restoration projects have been completed to provide habitat for swans. The Little Doney Lake Project secured over 2,500 acres of mixed conifer and aspen habitat adjacent to the Blackfoot Clearwater WMA. This species is considered '*potentially at risk*' on the Montana SOC list.

Arctic Grayling: Since 2006, the focus of Arctic grayling restoration efforts in Montana include the implementation of the Candidate Conservation Agreement with Assurances (CCAA) for Arctic Grayling in the upper Big Hole River (Big Hole CCAA), and restoration of grayling to the Ruby River and Elk Lake (in the Centennial Valley). The goal of the Big Hole CCAA program is to increase distribution, abundance and resiliency of Big Hole Arctic grayling by improving, protecting, and making accessible habitats important to all life stages of the species. With over 30 landowners and 150,000 acres enrolled in the program, the Big Hole CCAA is currently the largest such effort in the United States. The program has resulted in improved stream flows and riparian and channel condition in more than 80 miles of stream and subsequently, grayling have increased in distribution and abundance. "Replication" of the remaining native Arctic grayling populations remains a focus of conservation efforts, and introductions of Big Hole grayling to the Ruby River have resulted in a naturally reproducing population. More recently, Red Rock Lakes' grayling were introduced to Elk Lake, a nearby but isolated lake that historically maintained an adfluvial grayling population. FWP is currently preparing a revised Montana Arctic Grayling Restoration Plan. The plan will include overall grayling restoration objectives, and identify opportunities to expand the species range in Montana. This species is a Montana SOC and is considered to be '*at high risk*' of extirpation.

Blue Sucker: FWP has used standardized annual sampling efforts and targeted radio telemetry projects in the Missouri River (above and below Fort Peck Reservoir), Yellowstone River, and associated major tributaries to these rivers, to identify and characterize blue sucker home areas, spawning queues, migration paths, and spawn timing and locations. These projects have provided significant information on the status, life history strategies, and habitat use of blue suckers; however, spawning success and juvenile recruitment remains unclear in some areas. FWP has coordinated with the U.S. Bureau of Reclamation (BOR) in modeling and trial efforts to regulate spring water releases from impoundments on the Missouri River (above Fort Peck Reservoir) and the Marias River in a way that better mimics natural water regimes important for blue sucker spawning. Through 2013, trial releases have only occurred from Tiber Dam on the Marias River. Regulated flow releases and their impacts on water quality (e.g., temperature and turbidity) from Fort Peck Dam continue to be a concern, as are impediments to migration from dams on the Yellowstone River including the Intake and Cartersville diversions. This Montana SOC is considered both '*at risk*' and '*potentially at risk*' depending on the population.

Burbot: Though there are areas of concern for the species (e.g., Kootenai River, Yellowstone River), routine and targeted sampling of burbot continue to indicate a widespread distribution in

their historic range, including periodically high abundances in some relatively cold and deep reservoirs. Owing to an apparent "stable status" in most waters, burbot specific research studies have not been a priority of the department between 2006 and 2013, an exception being a movement and habitat use study in the lower Yellowstone River. Angler exploitation is periodically monitored during water body specific creel surveys, and relative to their status and low harvest rates, current burbot exploitation has not been deemed a concern. FWP's understanding of burbot status and population characteristics continuously increases through existing sampling efforts, and where status concerns have been noted, e.g. Yellowstone River, additional studies are being considered. Burbot currently are not a Montana SOC, and are considered '*apparently secure*' in Montana's state rank.

Pallid Sturgeon: As an ESA listed endangered species, pallid sturgeon receive considerable attention from FWP and other resource agencies. While the USFWS oversees recovery efforts for this sturgeon, the program is collaboratively developed and implemented through the Upper Basin Pallid Sturgeon Workgroup, of which FWP is a full participating member. Research efforts have resulted in considerable knowledge gained concerning the ecology and status of Pallid Sturgeon in the Missouri (above and below Fort Peck) and Yellowstone Rivers in Montana. However, factors related to reservoir operations (particularly Fort Peck Reservoir) and passage (e.g., Intake Dam) in both drainages have not been addressed, and consequently sturgeon have not naturally recruited to the system in decades. Efforts to collect gametes from remaining wild adults (<120 individuals) has been very successful, and the subsequent introduction and high survival rate of resulting juvenile sturgeon ensures the persistence of the species in Montana for the foreseeable future. FWP has been closely involved in efforts to address passage concerns at Intake Dam, and is involved in planning efforts to create more natural flow regimes from reservoirs on the Missouri River above Fort Peck. Restoration of critical habitats, removal of barriers to migration, and minimizing the water quality impacts of reservoirs will continue to be a focus of FWP efforts for long-term pallid sturgeon recovery, which includes self-sustaining persistence. Pallid sturgeon are a Montana SOC and are considered to be '*at high risk*' of extirpation.

Westslope and Yellowstone Cutthroat Trout: Conservation and restoration of both subspecies of cutthroat trout continue to be a primary focus of general management activities and cutthroat specific programs in FWP Regions 1 - 5. Though the type of programs being implemented vary by location, generally efforts focus on habitat restoration; maintaining connectivity (e.g., removing barriers to movement) where the migratory life form is prevalent; reintroduction genetically "pure" cutthroat to historically occupied streams; "replicating" existing aboriginal populations; placement of barriers to non-native fish; and in some locations the removal of non-native trout species to reduce or eliminate competition and hybridization. Notable projects among the many efforts implemented over the last several years include the introduction of Westslope Cutthroat Trout (WCT) to 65 miles of stream in the Cherry Creek drainage (Madison River basin); an on-going effort to remove hybridized trout from headwater lakes in the South Fork of the Flathead River drainage which will ultimately result in the removal of primary threats to WCT in nearly 1,900 miles of stream; and reintroduction of Yellowstone Cutthroat Trout (YCT) to 25 miles of stream in the Sage Creek drainage (Shoshone River basin). These, and numerous other similar efforts, are developed and implemented by both management biologists and biologists specifically dedicated to cutthroat conservation efforts. On a statewide

level, cutthroat trout conservation efforts are guided by the *Memorandum of Understanding and Conservation Agreement for Westslope and Yellowstone Cutthroat Trout in Montana* (FWP 2007), and the *Yellowstone Cutthroat Trout Conservation Strategy for Montana* (FWP 2013b). Both cutthroat species are on the Montana SOC list and are considered to be '*at risk*'.

Black-tailed Prairie Dog: FWP led efforts to identify the highest priority prairie dog complexes in Montana and explore opportunities for landowner incentive or stewardship programs to keep prairie dogs on these complexes. Statewide mapping was conducted in 2009, and later 5 of the largest prairie dog complexes were mapped and ground-truthed to inform ongoing conservation discussions. Discussions with partners such as the NRCS and the Western Association of Fish and Wildlife Agencies (WAFWA) are ongoing to identify funding sources for landowner incentives and to focus conservation in some of these large complexes.

FWP is a partner in development and testing of the sylvatic plague vaccine and is supporting the field efficacy trials underway in northeast Montana. The Montana Prairie Dog Working Group continues to meet annually to establish the highest priority conservation needs for the species across the state.

These above efforts and the data collected during surveys contributed to the 'not warranted' finding for the black-tailed prairie dog issued by the USFWS in 2009. This species is a Montana SOC species and is considered '*potentially at risk*'.

Grizzly Bear: Efforts to reduce human-caused mortality and proactively manage human-bear conflicts were carried out in all 3 grizzly bear recovery areas of Montana. Full time bear specialists worked across Montana to reduce conflicts by encouraging appropriate food and garbage storage and appropriate behavior while hunting or recreating in grizzly bear country. FWP participation in the Interagency Grizzly Bear Study Team and the ecosystem management teams ensures managers' concerns and conservation priorities are noted in the large scheme of conservation. A number of conservation easements or habitat restoration projects were conducted to provide habitat for grizzlies. This included the Little Doney Lake Project that secured over 2,500 acres of mixed conifer and aspen habitat adjacent to the Blackfoot Clearwater WMA. The grizzly bear is on the Montana SOC list and one population is considered to be '*at risk*' while the other populations are considered to be '*potentially at risk*'.

White-tailed Prairie Dog: Translocation of White-tailed Prairie Dogs (WTPD) in south central Montana was intended to re-establish the species at colonies from which they had been extirpated and to provide prey and habitat for a variety of other wildlife. Translocation was also intended to ensure maintenance of a viable population of WTPDs in Montana. FWP translocated 44 prairie dogs within Carbon County with these intentions in mind and to remove individuals at colonies under threat from highway re-alignment. WTPD conservation in Montana also benefitted from FWP's leadership of the Montana Prairie Dog Working Group as well as involvement with WAFWA efforts to conserve prairie dogs. This species is on the Montana SOC list and is considered to be '*at high risk*' of extirpation.

Spiny Softshell: FWP has conducted spiny softshell surveys on both the Yellowstone and Missouri Rivers over the past 6 years. Results of these surveys did not change the Montana SOC

status from a species '*potentially at risk*'. The threats to this species remain the same, e.g., interrupted natural hydrologic regime by dams and reservoirs. FWP partnered with Montana State University to conduct a habitat use study of spiny softshells on the Missouri River in 2010. Telemetry data indicated turtles could move long distances, with some movements of over 25 river miles. Island nests were difficult to find but intensive nest searching confirmed that nests are most susceptible to predators and changing water levels. Habitat conservation efforts along both the Yellowstone and Missouri Rivers provide critical habitat to spiny softshells and will continue to be a focus of FWP river and shoreline conservation projects.

SPECIES GROUPS OF GREATEST INVENTORY NEED

The following species groups were targeted for inventory in the 2006 Implementation Plan as there were not enough data to determine their level of conservation need. This summary outlines the progress to fill those data gaps.

Bats: Acoustic bat monitoring has been conducted at dozens of FWP properties, including conservation easements and WMAs, to bolster bat presence data within Montana databases. FWP has partnered with MNHP and cavers in Montana to gather information on cave use by bats to include data on maternity colonies and hibernacula. Since 2010, 8 new hibernacula and dozens of new roost sites have been recorded. A network of over 50 long-term bat acoustic monitoring stations have been deployed across the state to gather baseline data on bat presence and activity levels.

Mussels: A 3-year SWG-funded study, completed in 2009, documented the occurrence and distribution of 3 native and 3 introduced mussel species in Montana and Idaho. Approximately 1,150 sites were sampled during the comprehensive inventory effort that included all major drainages in Montana. Five of 6 mussel species were found to have secure populations, and in some cases were expanding their distribution. A notable concern was a significant reduction in the range of the native western pearlshell mussel. Owing to this reduced distribution and continued threats, the pearlshell was identified as a species at risk and classified as a Montana SOC in 2008. The western pearlshell remains a focus of inventory efforts and experimental translocation projects in the Blackfoot drainage. This inventory project was summarized in a 2010 report titled *Freshwater Mussels in Montana: Comprehensive Results from 3 years of SWG funded Surveys* (Stagliano 2010).

Prairie Fish: Between 1999 and 2007, prairie fish assemblages were sampled at nearly 1,700 sites in FWP Regions 4 – 7. A majority of these sites were of small, warm water streams that had not been previously sampled and included sites in the 3 major eastern Montana drainages – the Little Missouri, Missouri, and Yellowstone Rivers. Thirty-two native and 21 introduced species were captured during the project, and of the 500,000 fish collected, 92% were native. These efforts were summarized by in a report titled *Synthesis of Montana Prairie Stream Fish Surveys, 1999 – 2007* (Bramblett 2008). The surveys and report provides a foundation for future monitoring efforts and the basis for additional work to conserve these communities. Beyond this project, FWP continues to complete annual monitoring efforts for all species in the larger rivers in eastern Montana, often related to pallid sturgeon recovery efforts. Finally, work has been

recently completed documenting the importance of connectivity between large prairie rivers and their tributaries (Duncan et al. 2012).

Reptiles: Terrestrial reptile surveys were conducted during the 3-year Diversity Monitoring project (2008-2010). All south-facing rocky slopes were surveyed for reptiles within randomly selected sites across the state. Eight species were detected during Diversity Monitoring surveys and a number of range expansions were noted which included range expansions for all 3 Montana gartersnake species. Dozens of FWP properties including conservation easements and WMAs were also surveyed for reptiles as part of region-based monitoring. Data collected from all of this work filled many of the existing occupancy gaps for individual species. Spiny softshells were surveyed on both the Yellowstone and Missouri Rivers as part of specific monitoring or research projects.

Shorebirds: Shorebirds were recorded incidentally during the 2009-2010 Montana colonial waterbird surveys as well as during the multi-species 'Integrated Monitoring by Bird Conservation Region' project (2009-2013). Targeted shorebird surveys were not conducted, as monitoring of other species groups was identified as a higher priority.

PLANNING STRUCTURE AND APPROACH

The first step the Plan Coordinator (Coordinator) took in the revision process was to send out a survey to FWP staff who either may have been involved in developing the CFWCS in some capacity, or might want to be involved in the revision. The survey was not exclusively a CFWCS/SWAP survey; it included questions for 2 other projects. The portion of the survey referencing the SWAP can be found in Appendix B. The survey was sent to 156 FWP employees and 126 (81%) responded.

The Coordinator followed up with face-to-face interviews with 63 survey recipients. In addition, 28 individuals from 13 agencies/organizations were met with to discuss their past involvement in the CFWCS development and how their agency or organization would like to be involved in the future development of the SWAP (Appendix C).

The survey and meetings helped lay the foundation for the SWAP development and involvement. Comments on how to engage FWP Regional Offices and staff were particularly helpful. Also very helpful was the consistent message from external agencies and organizations that they were very interested in being kept updated, although they were unsure how frequently they could actively participate given their available time and limited funding.

An internal Steering Committee was convened to guide the SWAP based on input and recommendations from newly formed Technical Teams. There were several committee and team member changes because of staff changes and retirements. These lists represent those that were serving on the committee and teams as of submission of the draft SWAP.

Steering Committee

Jeff Hagener	FWP Director
Ron Aasheim	Communication and Education Bureau Chief
Ken McDonald	Wildlife Administrator
Bruce Rich	Fisheries Administrator
Pat Flowers	Region 3 Supervisor
Tom Flowers	Region 6 Supervisor

Aquatic Technical Team

Leo Rosenthal	Region 1 Fisheries Biologist
Ladd Knotek	Region 2 Fisheries Biologist
Ron Spoon	Region 3 Fisheries Biologist
Grant Grisak	Region 4 Fisheries Biologist
Mike Ruggles	Region 5 Fisheries Biologist
Tyler Haddix	Region 6 Fisheries Biologist
Caleb Bollman	Region 7 Fisheries Biologist
Lee Nelson	Native Species Coordinator

Terrestrial Technical Team

Chris Hammond	Region 1 Wildlife Biologist
Kristi DuBois	Region 2 Wildlife Biologist
Claire Gower	Region 3 Wildlife Biologist
Brent Lonner	Region 4 Wildlife Biologist
Ashley Beyer	Region 5 Wildlife Biologist
Mark Sullivan	Region 6 Wildlife Manger
John Ensign	Region 7 Wildlife Manager
Lauri Hanauska-Brown	Nongame, Threatened, and Endangered Bureau Chief
Kristina Smucker	Wildlife Biologist (served as the liaison to the Montana Bird Conservation Partnership)

External Technical Team Members

Members of this group were invited to participate in all meetings where the above technical teams met, except for the initial meeting in October 2011. Because of staffing shortfalls, travel restrictions, and a variety of other factors, participation varied between members and meetings. When agencies/organizations could, they sent an alternate to participate in person or via a conference call.

Jake Chaffin	Bureau of Land Management
Gary Tabor	Center for Large Landscape Conservation
Bryce Maxell	Montana Natural Heritage Program
Pete Husby	Natural Resources Conservation Service
Brian Martin	The Nature Conservancy
Yvette Converse	U.S. Fish and Wildlife Service
Alan Dohmen	U.S. Forest Service

GUIDANCE DOCUMENT

In February 2012, FWP held a Structured Decision Making meeting to help the Steering Committee develop a guidance document for the SWAP revision. Invited to this meeting were Steering Committee members, Regional Supervisors, Administrators, Bureau Chiefs, and a few biologists.

A problem statement and objectives were finalized in March 2012 to guide what to include in the SWAP revision and what the SWAP must be used for (Appendix D).

PUBLIC INVOLVEMENT

Public involvement is critical to the SWAP development for Montana and will become even more important as FWP moves toward implementation. The internal technical team was queried about the best way to announce the SWAP revision to the public. They decided to inform the public of the SWAP revision via an informational letter that was sent to a mailing list that contained over 450 individuals, agencies, and organizations. Agencies and organizations were asked to forward the letter on to their entire staff, membership, or mailing lists. It is uncertain how many people the letter reached. Additional information was provided to the public via press releases, website updates, and 4 newsletters to the mailing list above. All of the correspondence included the Coordinator's contact information and people were encouraged to contact her if they wanted more information or wanted to know how to be more involved.

A 30-day public review was announced with a press release, an announcement in the newsletter and on the SWAP website, and letters or emails sent to the mailing list referenced above. The public was encouraged to view and/or download the SWAP online. During the draft review, XX people either from the general public or representing other agencies and organizations submitted comments concerning the draft.

IMPLEMENTATION

When fully implemented, this SWAP will be dynamic and will be revised based on the constant collection of data that will inform the ranking of CTGCN, SGCN, and Focal Areas. Changes to the SWAP will redirect priorities in terms of the most at-risk species and community types. Any SWAP revisions will be submitted to the USFWS annually for review and approval.

All of the priority SGCN and Tier I CTGCN in the SWAP are equal conservation priorities for Montana. In addition, no conservation action identified in this document is more or less important than any other, as successful conservation of the species and communities in greatest need will require addressing all of these concerns over time. In addition, singling out certain objectives reduces the flexibility of FWP and its partners to take advantage of conservation opportunities as they occur.

The biggest challenge to completely and successfully implement the SWAP is the lack of secure funding. In addition, the unstable nature of funding serves as a roadblock that could prevent FWP and its partners from committing to long-term projects. It is anticipated that this funding status will remain the same in the near future.

Because of the funding challenge, a new Implementation Plan, a companion document to the SWAP, will be developed immediately following SWAP approval by USFWS. Though all conservation actions identified in the SWAP are equal, the Implementation Plan will select a subset of CTGCN and SGCN that FWP intends to focus efforts on in the first 5 years. The Implementation Plan will be reviewed after the first 3 years of implementation.

METHODS

COMMUNITY TYPES OF GREATEST CONSERVATION NEED

The Aquatic Technical Team (ATT) and Terrestrial Technical Team (TTT) were asked to review community types identified in the CFWCS (FWP 2006b) and Ecological Systems developed by MNHP (MNHP 2013a) to help them identify and describe community types in the SWAP revision. The main consideration was defining the level of detail (e.g., scale) needed in a map layer that would best suit assessing community type conservation needs and identifying actions.

In addition to identifying community types, the Teams were asked to prioritize the types into 3 tiers based on level of conservation need. Both teams took different approaches on these tasks, as outlined below.

COMMUNITY TYPE TIER DEFINITIONS

Tier I. Greatest conservation need. There is a clear obligation to use resources to implement conservation actions that provide direct benefit to these community types.

Tier II: Moderate conservation need. Resources could be used to implement conservation actions that provide direct benefit to these community types.

Tier III: Lower conservation need. These areas may have existing adequate conservation and contribute to local conservation efforts, or provide buffers where they surround Tier I and Tier II community types.

AQUATIC COMMUNITY TYPES

The ATT decided to keep the aquatic community descriptions that were used in the CFWCS (FWP 2006b). Aquatic communities were described as *Intermountain Valley Rivers*, *Intermountain Valley Streams*, *Mixed Source Rivers*, *Mountain Streams*, *Prairie Rivers*, *Prairie Streams*, *Lowland Lakes*, *Lowland Reservoirs*, *Mountain Lakes*, and *Mountain Reservoirs*.

Most aquatic SGCN in Montana are found in streams and rivers, so it follows that most research, survey, inventory, and management actions are conducted in these habitats. Because of this, the ATT decided to identify all streams and rivers as Tier I community types, all lakes as Tier II, and all reservoirs as Tier III. However, some lakes and reservoirs were elevated to Tier I if they were critical to the life cycle of certain SGCN (Appendix F).

Existing species lists within agency databases were used to identify species associated with each community type. The aquatic association lists were created by intersecting Fish Distribution – Lakes and Streams GIS data (FWP 2013c) with Aquatic Habitat Classifications for Montana Lakes and Streams (aquatic community types) GIS data (FWP 2005) using a geoprocess in ArcMap. The resulting intersect tables were managed in a Microsoft Access database to create lists of species occurrences for each aquatic community type.

TERRESTRIAL COMMUNITY TYPES

The TTT agreed that community types defined in the 2006 CFWCS (MFWP 2006b) were too broad and should be described at a finer scale. They next reviewed the 3 levels of Ecological Systems (MNHP 2013a). They felt the first level (6 community types) was similar to the CFWCS and too broad to be useful in the SWAP, whereas the third level was too fine (60 community types) for developing conservation actions to be included in the SWAP. The TTT chose to use Level Two Ecological Systems, which identifies 21 community types, because it fit with the direction of the SWAP revision and provided the level of detail needed as identified by the TTT.

Several modifications were made to Level Two Ecological Systems for the purposes of display, analysis, and reporting. All 5 wetland community types (*Bog or Fen*, *Depressional Wetland*, *Forested Marsh*, *Herbaceous Marsh*, and *Wet Meadow*) were combined. At the request of technical team members, *Alpine Grassland* and *Alpine Sparse and Barren* were combined as were *Sagebrush Steppe* and *Sagebrush-dominated Shrubland*. In addition, 6 other landcover types were included and assessed as Ecological Systems. These were *Agriculture, Developed, Harvested Forest, Introduced Vegetation, Mining*, and *Recently Burned*. This resulted in 21 community types that were to be ranked (Figure 1).

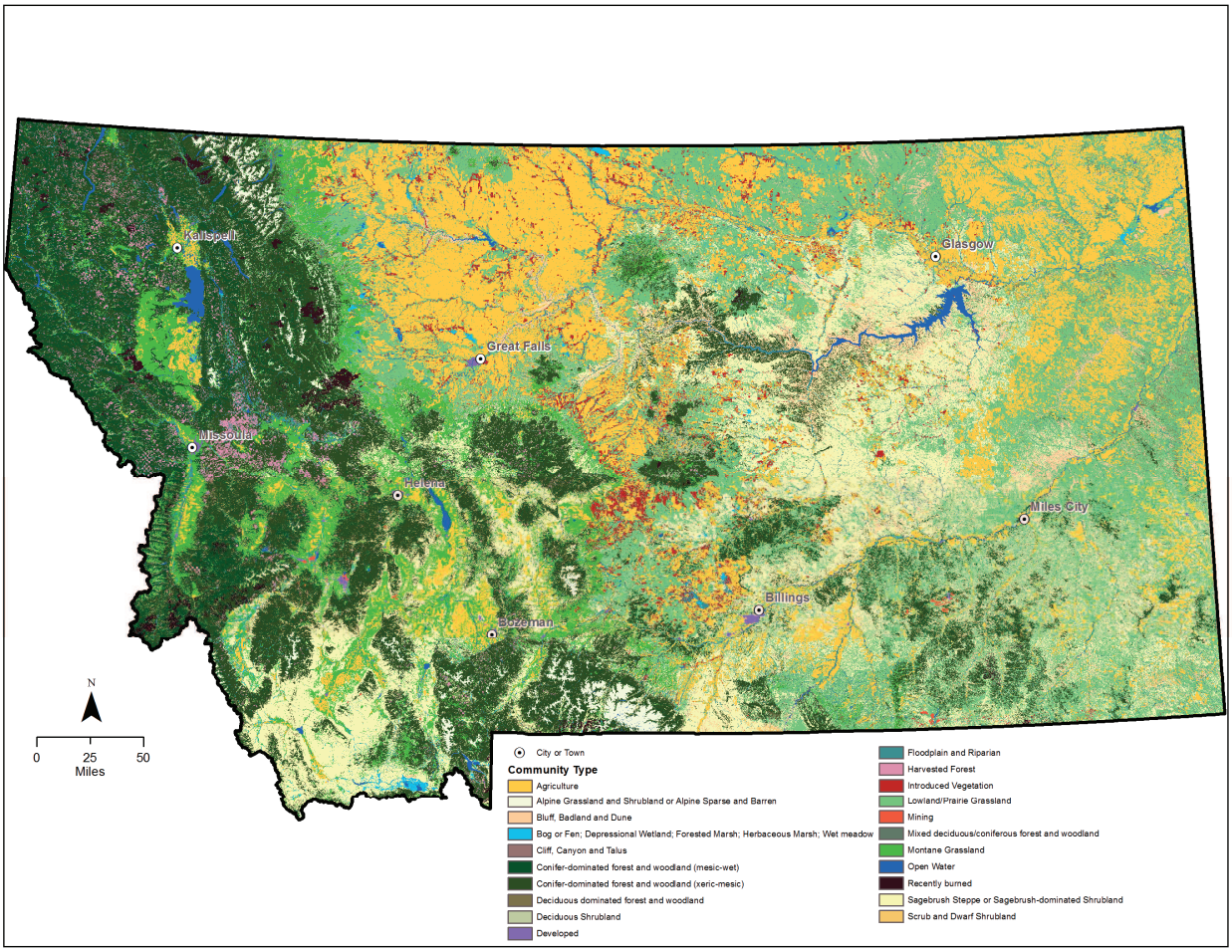

Figure 1. Community Types in Montana

Before ranking, the TTT suggested that the community types be further refined by geographical location. It was clear that each community type was not equally valuable or equally threatened across its entire distribution in Montana. For example, grasslands in the eastern part of the state support many more SGCN and are affected by different threats than grasslands in the western part of the state. The TTT wanted the ability to identify these differences. Omernik's Level III Ecoregions (Environmental Protection Agency 2013; Figure 2) were intersected using a geoprocess in ArcGIS 10.1 with Ecoregions as a way to identify and describe the geographical differences in community type. Seven Ecoregions were used to separate the 21 community types identified. Because not every community type was found in all 7 Ecoregions, there were a total of 126 different community types to assess and rank for the entire state.

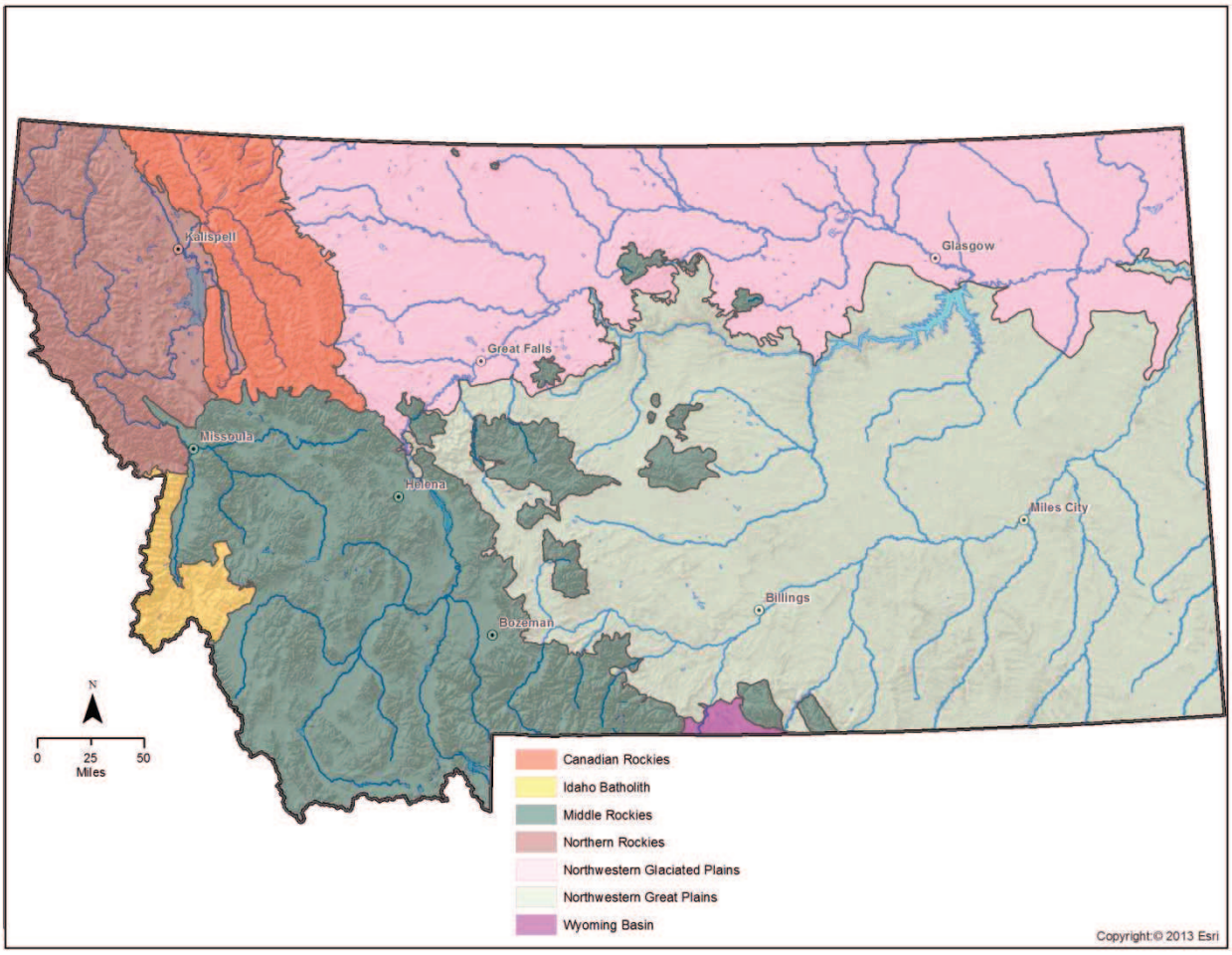

Figure 2. Omernik's Level III Ecoregions

The following rules were followed to assign each community type to Tier I, II, or III. See Appendix E for the full list of tiered community types.

Tier I.

TIa. *Floodplain and Riparian*, all *Wetland* types, and *Open Water* in every Ecoregion because of the biodiversity found in wet landscapes and the importance of water during different life cycles of species.

TIb. Any community type that was associated with at least 66.7% of all SGCN within an Ecoregion.

Tier II.

TIIa. Any community type that was associated with at least 10%, but less than 66.7%, of all SGCN within an Ecoregion.

Tier III.

TIIIa. Any community type that was associated with less than 10% of all SGCN within an Ecoregion.

TIIIb. *Developed* because of the permanent modification of the habitat and the understanding that no SGCN naturally depends on this community type.

Exceptions – These exceptions do not apply to the following community types which are always either Tier I or Tier III: *Floodplain and Riparian*, all *Wetlands*, *Open Water*, and *Developed*.

Ea. Any community type that had a landcover of 0.5% < 1% within an Ecoregion dropped one Tier, but no lower than Tier II.

Eb. Any community type with less than 0.5% landcover in an Ecoregion was considered Tier III.

Ec. If a community type within an Ecoregion had at least 1% landcover, it could be bumped up one tier if the majority of members on the technical team believed it should.

Existing species lists within agency databases were used to identify species associated with each community type. Species associations with ecological community types were identified by MNHP and FWP biologists, ecologists, and species experts during 2010-2012. Each species was assigned as being *'Commonly'* or *'Occasionally Associated'* with ecological community types based on a review of distribution records, species known range, expert knowledge and the Level 2 Montana Land Cover Framework (MNHP 2013b; Vance 2010) GIS data. Only *'Commonly Associated'* community type-species associations were used to identify associations for the SWAP. These species-community type associations were managed in a Microsoft Access database to create a list of expected species occurrences for each terrestrial community type.

Species of Greatest Conservation Need

The technical teams adopted the protocol and process that FWP and MNHP have been using for a decade to identify SOC (MNHP and FWP 2004). This method is a standardized ranking system to denote Global and State ranks (Master et al. 2003).

Before adopting the SOC list as the SWAP SGCN list, the technical teams first reviewed a list of all native vertebrates, mussels, and crayfish found in Montana and made recommendations to MNHP regarding which species should be reviewed for inclusion or removal from the SOC list. These recommendations were largely based on new information learned since a species was last reviewed.

Though the entire SOC list was adopted as the SGCN list, conservation actions were developed only for species that were assigned a State Rank of S1 (high risk) or S2 (at risk). This decision was made to ensure that limited resources were used to first focus on the most at risk species. While these species were chosen to focus conservation efforts, it is not implied that the other SGCN (i.e., species with a State Rank of S3) are excluded.

MNHP and FWP biologists review the SOC list annually in consultation with representatives of the Montana Chapter of The Wildlife Society, the Montana Chapter of the American Fisheries Society, and other experts. In addition, individual species are reviewed as they are petitioned for inclusion on or removal from the list. Because of the frequency of reviews, the SOC list is a dynamic list. If changes are made to the SOC list, the SGCN list will change as well. FWP will submit a letter to USFWS requesting approval of the change(s) no more than once per year.

During the initial planning stages, the FWP Steering Committee decided that the SWAP would not include Montana's invertebrate species. With nearly 1,000 species of aquatic invertebrates in the state, and at least twice that number of terrestrial invertebrates, it is impossible to develop a plan to comprehensively address invertebrate conservation in Montana. However, mussels and crayfish were included because they fall under FWP jurisdiction and management per Montana Statutes, Title 87 (FWP 2011).

Species of Greatest Inventory Need

In 2013, MNHP began maintaining another list in addition to the SOC list. This list identified species of highest inventory need because they either lacked baseline surveys or they had outdated surveys. This SWAP recognizes all SGCN on the MNHP highest inventory need list as being Species of Greatest Inventory Need (SGIN). In addition, Potential Species of Concern (PSOC) on this MNHP list are also considered to be SGIN in this SWAP. These species being data poor as well as potentially at risk, justifies their need to be targeted for survey and inventory.

CONSERVATION ACTIONS

There are 2 main components to this SWAP revision: Community Types of Greatest Conservation Need (CTGCN) and Species of Greatest Conservation Need (SGCN). While Focal Areas are identified (Appendices J-M), and will help direct conservation efforts for agencies and organizations, they are not the main objective of the SWAP.

While SWAPs generally have been species-centric, this revision is taking a different approach. Conservation actions have been developed for some SGCN, but the focus of this revision is to approach conservation by promoting actions that can be applied at a larger scale – community types. It is worth reiterating that SWAPs are severely under-funded for all the work that is recommended. This broad approach will focus efforts within CTGCN, so funding dollars can be used to address many species within one project. Approaching projects in this manner will provide benefits to several species at once rather than one species at a time.

Only CTGCN (i.e., Tier I) are described in the body of this SWAP. These community types guide our attention to the areas that offer the best opportunity to conserve Montana's SGCN. Appendix E includes the tiered list of all community types including those not addressed in the body of this plan.

The technical teams identified current impacts and future threats to CTGCN and SGCN, and then developed conservation actions to address and mitigate those impacts and threats. These actions were either new ideas brought forth by the technical teams or taken from the CFWCS (FWP 2006b) and other existing plans. Conservation actions were developed only for CTGCN and SGCN (State Rank S1 and S2; see Species of Greatest Conservation Need above).

The technical teams have made every effort to use existing management plans to describe the conservation actions for species and community types in the SWAP update. In this way many different plans come together in order to facilitate collaboration.